DISCUSSION

Dr Jerry R. Youkey (Greenville, SC). Over the course of my 15-year journey to the dark side of medicine, I have progressively become a closet cynic. It has finally become impossible for me to face the conundrums of our nonsystem of health care without eagerly anticipating the irreverent monthly editorials of David Cossman in the "General Surgery News." It is from that perspective that I commend Martin, Hupp, and Hanson for their work presented today. It is refreshing to witness some of our colleagues initiating a public health program for the benefit of their community. My hat is off to you. I also want to thank you for providing me with your manuscript for review.

I have three general areas of comment, concern, and question related to your presentation and to your manuscript. These involve the presentation of your data, your financial analysis, and your lack of recommendations.

In regards to your data presentation, I find it confusing at best. Your apparently arbitrary designation of subcritical vascular laboratory results into significant and critical categories in Tables IV and V is confounding. Significant for what? Critical to whom? Further, it is completely at odds with the fact that you chose more traditional values for following day notification of primary care physicians of truly critical results. I encourage you to change your end points to laboratory results showing truly critical disease, that is, carotid stenosis exceeding 80%, aneurysm exceeding 5 cm, and ABI of less than 0.3, and laboratory results consistent with systemic noncritical atherosclerosis warranting patient awareness, education, and risk reduction.

If you do this, I suspect that statistical analysis of your data will not support screening of the vast majority of these patients for critical disease. It is also likely to show that a single limited study for screening will identify the majority of patients with systemic noncritical atherosclerosis. Since your data presentation does not allow identification of the single best test to identify subcritical disease indicative of systemic atherosclerosis, it is impossible to tell if this is correct. Have you any insight into an analysis of your data based upon this hypothesis?

Although I realize that your statements regarding financial information were largely an after thought, they have given me limited but specific concerns. First, it is misleading to speak of the financial benefit of revenues. Groceries and mortgages are paid for with margin, which brings me to my second concern. I am quite skeptical of your statement that once the program was established, the cost of screening was about $25 per patient. Does that figure include all overhead costs such as lease and upkeep of space, liability insurances, interpretation fees, equipment depreciation, office personnel, and so forth? This is an important disclosure for all of us, as you may well establish with this publication a new global multitest vascular laboratory reimbursement benchmark for CMS and private payers across the country.

In closing, I must confess disappoint with your failure to provide recommendations regarding screening. I was hopeful that you would have analyzed your data and suggested an algorithm to identify which patients would benefit from what kind of screening. I can only surmise that either you plan to carefully follow your patients to show that long-term compliance with risk reduction consequent to your efforts will show efficacy of your program through reduction of morbid cardiovascular events or that you concluded that no screening could be justified from your data. Could you please clarify which, if either, of these suppositions is correct? Again, I commend the authors for their efforts and wish them success with their foundation-supported cardiovascular screening program.

Dr Jon A. Hupp: I would like to thank Dr Youkey for reviewing our manuscript and for his comments. Our definitions regarding intermediate and severe disease are somewhat arbitrary. The definition of intermediate disease, having an AAA of at least 3 cm or a carotid stenosis of at least 40% or an ABI of 0.7, would typically be a patient that deserves follow-up on a yearly basis and the severe disease level reflects individuals who need intervention or closer follow-up. We purposely did not make recommendations regarding who should be screened. One of our goals with Dare to C.A.R.E. was to be liberal regarding screening criteria such that we, and others, could look at the data and decide on appropriate screening criteria based on available resources and desired disease detection rates (Table V). We certainly want to find silent disease, but are also were interested in patient education and increased awareness. We have not attempted to identify any single best test for systemic atherosclerosis. Future plans do include a patient follow-up survey to assess patient risk reduction and compliance. Subgroup analysis of risk factors and disease detection is also ongoing.

INVITED COMMENTARY

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The American Heart Association has estimated that 8 to 12 million Americans are afflicted with peripheral arterial disease (PAD) and that nearly 75% of PAD patients are asymptomatic.[1] We, as vascular specialists, know all to well that the presence of PAD is associated with an increased risk of cardiovascular morbidity and mortality and that improvements in risk-factor profiles with behavior modification and pharmacotherapy can decrease the adverse outcomes of stroke, myocardial infarction, and limb loss. The key issue is the identification of persons at risk before symptomatic or critical disease becomes present. For that reason, unrecognized PAD constitutes an enormous public health problem with the potential for serious, if not fatal, consequences.

Many health organizations, including many professional vascular societies as well as governmental agencies, have recognized the importance of early screening and thus have joined groups such as The Peripheral Arterial Disease Coalition to improve both public and health professional awareness about the disease. It is well known that a simple ankle-brachial index measurement may provide an indication of the presence of subclinical atherosclerotic disease, therefore identifying patients who warrant aggressive education and risk-factor management.

As an example, the PAD Awareness, Risk, and Treatment: New Resources for Survival (PARTNERS) program, a multicenter, cross-sectional study conducted at 27 sites in 25 cities and 350 primary care practices throughout the United States (US), demonstrated a prevalence of PAD in 29% of patients screened in a primary care setting, only 11% of whom had classic symptoms of claudication.[2] Furthermore, many persons had been previously undiagnosed, and as a result of this unawareness, the rate of intensive treatment for risk factors was low. In addition in this study, screening tests discovered patients who also, not uncommonly, had concomitant cardiac, cerebrovascular, or abdominal aortic aneurysmal disease.

Martin and colleagues have taken community PAD screening programs to a new level and have established a new standard to which all should be upheld. In their unique Dare to C.A.R.E. program, they have successfully developed a screening program which include noninvasive testing for vascular disease, glucose and

cholesterol measurements, and blood pressure determination. The most amazing, and perhaps important, aspect of the program is the involvement of community physicians and health care providers in providing educational lectures to each participant. By keeping meticulous records, the authors are able report herein on the results of the first 6 years of more than 12,000 screenings.

It is unfortunate that the US Preventative Services Task Force reiterated in 2005 their 1996 recommendations against PAD screening except for a single ultrasound scan for abdominal aortic aneurysms in men aged older than 65 years who have ever smoked.[3] The belief of this Task Force that "screening-associated" harm may occur in the form of unnecessary interventions may actually contribute to the under-recognition and treatment of PAD. Martin et al have shown that not only can the tests be beneficial, regardless of whether or not they lead to interventions, but that the resultant education and disease awareness and institution of medical therapy from the screenings may avoid the public health problem of undetected PAD and resultant adverse cardiovascular events. I congratulate his group on their success and ability to unite their community around the program.

REFERENCES

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